Considerations for Monitoring and Evaluation of Mitigation Strategies Implemented in Institutions of Higher Education

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Overview

As institutions of higher education reopen for in-person instructions, it is important to have systems in place for the monitoring and evaluation of COVID-19 mitigation strategies. This resource provides example evaluation questions, indicators, and data sources to help institutions of higher education, their administrators, public health agencies, and evaluation professionals to monitor and evaluate the implementation and impact of COVID-19 mitigation strategies in institutions of higher education on transmission of SARS-CoV-2, the virus that causes COVID-19.

CDC's Considerations for Institutions of Higher Education provides considerations on strategies to prevent SARS-CoV-2 transmission. institutions of higher education may consider implementing multiple COVID-19 mitigation strategies as they reopen including, but not limited to, requiring students, faculty, and staff to wear masks, restricting mixing between groups, integrating safe and effective cleaning and disinfection, communicating prevention messages , ensuring social distancing (e.g., maintaining a distance of at least 6 feet from others) as much as possible, limiting large group gatherings (e.g., assemblies, orientation), enhancing ventilation in buildings, and reinforcing hand hygiene. These mitigation strategies may be tailored to the needs and situation of each school, with special attention to individuals at increased risk and disproportionately affected populations. The figure provides an abbreviated and tailored version of the logic model for U.S. Community Mitigation Strategies for COVID-19 for institutions of higher education.
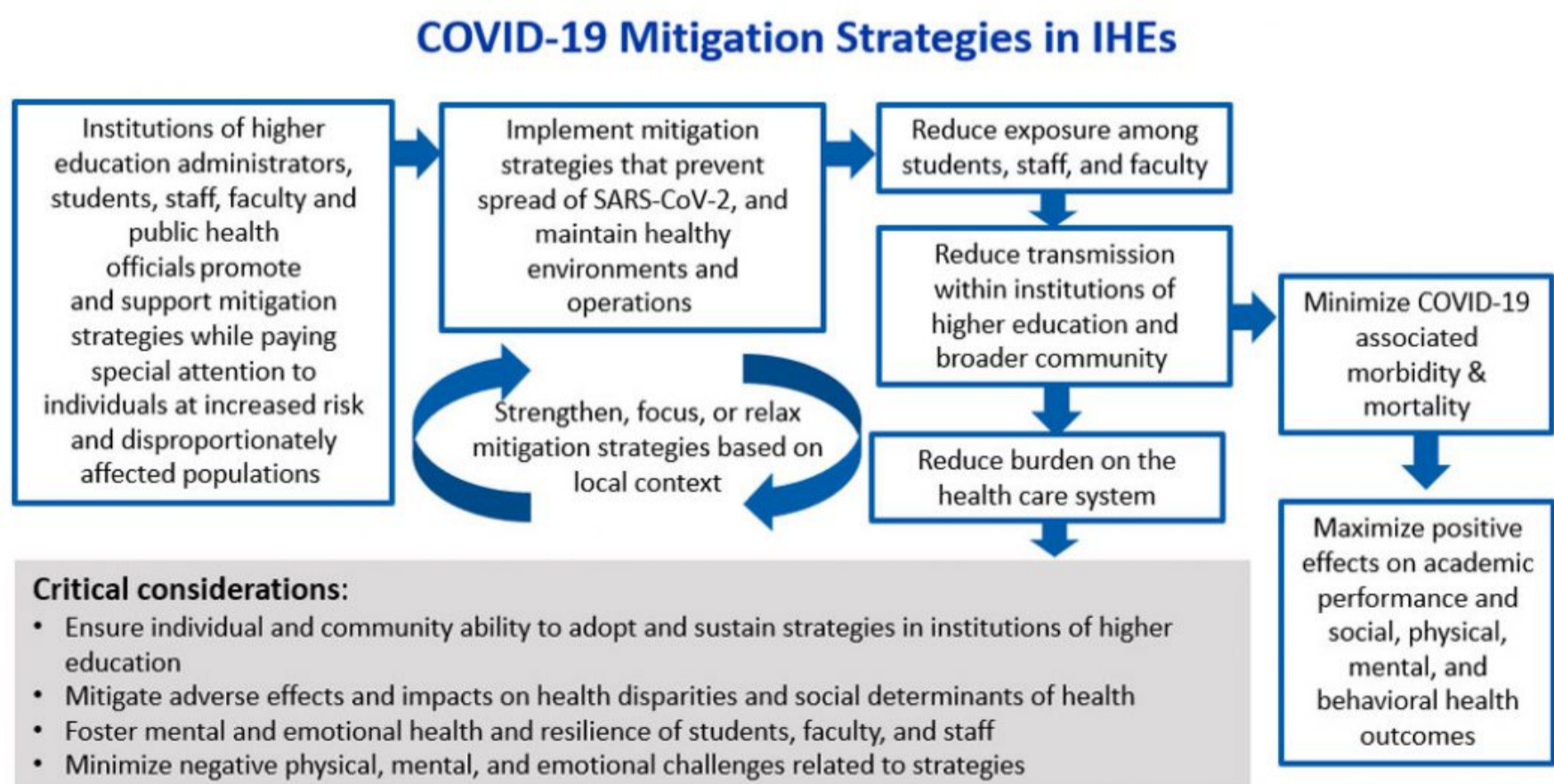
View Text Description

Monitoring and Evaluation Findings May Be Useful to Institutions of Higher Education

Monitoring and evaluation provide practical information for institutions of higher education, their administrators, faculty (program implementers), parents, state and local evaluators, and public health officials and vested stakeholders for timely decisions to support health and safety of all students, faculty, and staff, and promote health equity.

Institutions of higher education and public health agencies, in collaboration, may use the example evaluation questions, indicators, and data sources below to develop a monitoring and evaluation protocol and determine a scope feasible for their situation. These are not exhaustive lists of questions, indicators, and data sources, and they may be adapted to meet community priorities and needs.

Conducting monitoring and evaluation may help institutions of higher education examine their unique circumstances and make the best proactive decisions for their students, teachers, and staff, including:

- Identify which factors help or hinder effective implementation of mitigation strategies in institutions of higher education to reduce the spread of SARS-CoV-2
- Inform allocation of resources effectively to reduce the spread of SARS-CoV-2 in institutions of higher education
- Identify and communicate about needs for additional resources and support to implement mitigation strategies effectively in institutions of higher education
- Understand which mitigation strategies are effective to reduce spread of SARS-CoV-2 to maximize the positive outcomes while minimizing related negative consequences
- Ensure the needs of individuals at increased risk and disproportionately affected populations are met
- Inform decision-making about strengthening, focusing, and relaxing mitigation strategies (e.g., cleaning and disinfecting frequently touched surfaces at an appropriate schedule)
- Assess how different populations participate in, and are affected by, mitigation strategies to ensure health and safety of all students, faculty, and staff and to promote health equity
- Share data and lessons learned about practices to prevent and reduce the spread of SARS-CoV-2 in institutions of higher education with key stakeholder groups, including local policy makers, education and health agencies, school boards, chancellors, administrators, faculty, staff, students, parents, caregivers, and surrounding community

Potential Data Sources

Institutions of higher education and public health agencies, in collaboration, determine the best way to collect data for their institute(s) that reflect circumstances in their communities. State and local data already being collected are potential monitoring and evaluation data sources[1]. These data may include policies (e.g., stay-at-home orders, mass gathering restrictions, mask-wearing requirements, institutions of higher education policies and recommendations) and administrative records (e.g., past and current student and faculty attendance, class cancellations, plans for reopening). Primary data may also be collected, including student health clinic data, symptom screening results on campuses[1], occupational health or employee health information[1], and relevant local and national surveys of students, faculty, and staff. CDC has several data sources related to health outcomes in institutions of higher education that are available to health departments and institutions of higher education, including the CDC COVID-19 Data Tracker[2] and ACHA-National College Health Assessment (NCHA ⤢)[3,4].

Example Questions, Indicators, and Data Sources

Here are example questions, indicators, and data sources that may be used to evaluate COVID-19 mitigation strategies in institutions of higher education.

1. Which mitigation strategies are being implemented and how and when are they implemented in institutes of higher education?

Related qualitative and quantitative indicators

- Policies, implementation, and adherence to mitigation strategies in institutes of higher education to prevent and reduce the spread of SARS-CoV-2 among students, faculty, and staff, including but not limited to the following:

Potential data sources[1]

- Policy records
- Administration records
- Surveys

- Use of distance learning, including hybrid designs vs. in person
- Symptom screening procedures for students, staff, and faculty (at-home vs. in-school)
- COVID-19 testing policies and protocols
- Social distancing policies and strategies on campus including modified layouts, physical barriers (e.g., desk dividers), reduced class sizes, limiting crowding in hallways and walkways, etc.
- Changes to housing, e.g. limiting residence hall capacity
- Modifications to class operations (e.g., alternating schedules, reducing class size), use of common areas (e.g., kitchens, lounges, bathrooms) in dorms and classroom buildings, and school operations (e.g., traffic flow, single entry/exit)
- Plans to teach, reinforce, and/or require behaviors that reduce spread such as hand hygiene or use of masks for students, faculty, and staff
- Protocols to teach, reinforce and/or require hand hygiene among students, faculty, and staff
- Plans for cleaning and disinfection of frequently touched surfaces and reducing sharing of common objects
- Availability and use of appropriate resources (e.g., masks, hand soap, hand sanitizer) to promote behaviors that reduce spread of SARS-CoV-2 for students, faculty and staff
- Modifications of transportation to and from campus, including changes to shuttle or bus services, accessible transportation for individuals with disabilities, and transportation to and from events on campus
- Checking and improvements to ensure adequate ventilation ⬈ in buildings
- Modification for dining halls, meals, and food services (e.g., pre-plating, food delivery, grab and go options, and staggered meal service)
- Modifications for libraries, computer labs, and other shared student spaces (e.g. sorority and fraternity chapter homes)
- Modifications for higher risk activities, such as athletics, music, choir, orchestra, and marching band
- Modifications for student groups, clubs, and other on-campus extracurricular activities
- Considerations for students, faculty, and staff with developmental and behavioral disorders, with disabilities, or at increased risk for severe illness from COVID-19
- Plans for participation in international travels and study abroad
- Plans for risk communication within institutes of higher education, (e.g., posting of signs in visible locations, broadcast announcements, and provision of educational materials in accessible formats for persons with disabilities and limited English proficiency)
- Policies for COVID-19 testing on campus or upon returning to school

- Plans for and implementation of professional development and/or educational sessions for students, faculty, and staff regarding COVID-19
- Plans for and implementation of communication with students, parents, and families regarding COVID-19

- American College Health Association (ACHA) Survey Reports on Health Centers' Pandemic Operating Status and Response 📄 ⬈ [4,5]

- Policies and plans for absenteeism, excused absences, and/or sick leave for students, faculty and staff, including encouraging them to stay at home/dorm/residence hall when sick, having back-up staffing plans, plans for changes to remote learning, and methods for students to make up missed work for in-person courses
- Policies and infrastructure for isolation of symptomatic students, faculty, and staff
- Policies and plans in place for response to confirmed cases in students, faculty, and staff, including:
    - Notification to local public health departments
    - Isolation and accessible and safe transport of suspected/confirmed cases including designated isolation area with a dedicated bathroom, if possible
    - Notification and engagement of parents and guardians
    - Appropriate disinfection of areas used by sick persons
    - Notification and quarantine guidance for close contacts
    - Returning to school for cases and close contacts including considerations individuals at increased risk for severe illness
    - Thresholds for campus and classroom closures
- Plans for communication and collaboration with local and state public health officials
- Plans for staying informed about increases/decreases in cases in the community and nearby institutes of higher education
- Modifications to social, behavioral, and mental health resources and support for students, faculty, and staff

2. What are the facilitators, barriers, and factors that affect implementation of mitigation strategies in institutes of higher education?

Related qualitative and quantitative indicators

- Institutional characteristics and infrastructure, include, but not limited to the following:
    - Institution size, number of students
    - Range of class sizes, student-faculty ratio
    - On- vs. off-campus housing
    - Reliance on mass transit for transportation
    - Office-sharing for students/faculty
    - Geographic location, e.g., urban/rural/suburban status
    - Integration of student population in local community
    - Availability of classrooms with windows that open and other ventilation capacity
    - Health clinics on campus
    - Availability of water for hand washing
    - Availability of other health services
    - Availability of space or designated area to evaluate and isolate individuals who might be sick

Potential data sources[1]

- Policy records
- Administration records
- Surveys
- Qualitative study
- ACHA-National College Health Assessment (NCHA) [3,4]

- Ability to provide accommodations for specific populations of students, faculty, and staff for whom mitigation measures are not feasible or require additional adaptation
- Available funding and resources to implement mitigation strategies
- Available technology to support mitigation strategies
- Available supplies such as cleaning and disinfection supplies, soap or hand sanitizer, and masks
- Number and types of staff available to support implementation of mitigation strategies (e.g. substitute faculty, teaching assistants, health clinic staff, counselors, and other staff)
- Institutes of higher education, faculty, staff and student willingness to adopt virtual technology or use alternative teaching or learning methods if needed
- Knowledge, attitudes, and practices for mitigation strategies among parents, caregivers, guardians, students, faculty, and staff
- Misinformation or perceived stigma around COVID-19
- Parental or community attitudes and involvement
- Staff retention and/or attrition rates

3. What factors contribute to decisions to strengthen, focus, or relax mitigation strategies within institutes of higher education over time?

Related qualitative and quantitative indicators

- Availability of resources to implement mitigation strategies include, but not limited to the following:
    - Funding
    - Technology
    - Staff availability and hours
    - Supplies, including cleaning and disinfection supplies, soap or hand sanitizer, masks
    - Educational materials
    - On-campus testing
- Readiness, needs, or community risk assessments findings
- Guidance from public health or education agencies
- Levels of SARS-CoV-2 spread within the institute of higher education and surrounding communities (e.g., percent positivity, trends in case counts, number and size of outbreaks in institutes of higher education)

Potential data sources[1]

- Administration records
- Health department guidance and records
- CDC COVID-19 Data Tracker[2]

4. What is the association between implementation of mitigation strategies and COVID-19 associated morbidity and mortality in institutes of higher education?

Related qualitative and quantitative indicators

Potential data sources[1]

- Number and percent of students who have been home, isolated in school or sent home for COVID-19 like symptoms
- Number of students, faculty, and staff who test positive for SARS-CoV-2 and number given clinical diagnosis of COVID-19 throughout the academic year (including dates of diagnoses)
- Number of days missed by students, faculty and staff due to COVID-19
- Number of hours from time at onset of symptoms to time of isolation on-campus or residential housing
- Number of hours from time of notification of positive case(s) to time of notification of close contacts (someone who was within 6 feet of an infected person for at least 15 minutes) and initiation of quarantine measures
- Number of close contacts identified and quarantined
- Number of days the institute of higher education is closed, or in-person classes cancelled due to COVID-19
- Number of days semester is reduced for in-person instruction from initial academic calendar
- Number of students, faculty, and staff who have been hospitalized due to COVID-19
- Number of students, faculty, and staff who died from COVID-19
- Number and size of outbreaks (defined as at least 2 positive cases with a known connection) in the institute of higher education

- Administrative records
- Health department survey
- Case reporting
- Case surveillance
- CDC COVID-19 Data Tracker[2]
- Student health clinic records
- Occupational health or employee health

5. What is the relationship between implementation of mitigation strategies and academic achievement and social, behavioral, and mental health outcomes in institutes of higher education?

Related qualitative and quantitative indicators

Potential data sources[1]

- Markers of academic achievement, including (but not limited to) attendance, graduation rate, transfer rate, dropout rate, GPA, career readiness, academic probation, indicators of online engagement time (e.g., minutes spent in lessons)
- Rates of disciplinary action (suspensions or expulsions) for violation of ethical rules or code of conduct (fighting, behavioral violations, and other prohibited behavior)
- Student use of tobacco, alcohol, and other substances,
- Student use of counseling and other health care services
- Number and percent of students, faculty, and staff who report feeling stress related to COVID-19 or that COVID-19 has had a negative impact on their mental health
- Number and percent of students, faculty, and staff who have sought mental health care or resources for stress and coping, including visits to student health services or counseling services
- Occurrence of suicidal ideation and attempts by students, faculty, and staff

- Administrative records
- CDC COVID-19 Data Tracker[2]
- Student health clinic/ counseling services data
- ACHA-National College Health Assessment (NCHA) [3,4]

6. What impacts, if any, have mitigation strategies had on health disparities or social determinants of health for students, faculty, or staff in institutes of higher education?

Related qualitative and quantitative indicators

- Indicators of disparities among students, faculty, and staff assessed separately or in combination by age, gender, race and ethnicity, geography, disabilities status, and markers of socioeconomic status, including but not limited to the following:
  - Number of students eligible for state or federal student loan services
  - Percent decrease or increase in reports of assault and domestic violence
  - Rates of COVID-19 cases
  - Rates of school absenteeism
  - Number of students, faculty, and staff who have ability to utilize mitigation guidelines
  - Number of students who have access to resources for remote or off-campus learning (e.g., internet access)
  - Number of students, faculty, or staff who have supplies to support behaviors that reduce spread and maintain healthy environment (e.g. hand soap, hand sanitizers, masks, cleaning and disinfection supplies)
  - Number of students, faculty, or staff who have access to mental health and healthcare services
  - Percent of new and continuing students compared with recent years to assess potential impacts of COVID-19 and enrollment statistics
- Number and percent of students, faculty, and staff experiencing housing instability and homelessness due to reasons such as dormitory closures
- Number and percent of students, faculty, and staff experiencing food insecurity due to reasons such as dining hall closures

Potential data sources[1]

- Administrative records
- Health department community survey
- CDC COVID-19 Data Tracker[2]
- ACHA-National College Health Assessment (NCHA) ↗ [3,4]
- Surveys
- Qualitative study (i.e., interviews, focus groups)

Additional Resources

- Implementation of Mitigation Strategies for Communities with Local COVID-19 Transmission describes considerations for implementing community mitigation to reduce or prevent local SAR-CoV-2 transmission.
- An Approach for Monitoring and Evaluating Community Mitigation Strategies for COVID-19 includes a logic model that describes how mitigation strategies are implemented by governments, organizations, and individuals and how these strategies are related to reducing COVID-19 morbidity and mortality.

Footnotes

[1] Indicators and data sources may be tailored to align with the context of the intended evaluation and local communities, including what is important and feasible to assess and what data are available to do so. Some data may be

communities, including what is important and feasible to assess and what data are available to do so. Some data may be available at the district level and may not need to be collected from schools independently. When accessing school and

individual records, it is critical to maintain confidentiality and privacy of the student or staff member as required by the Americans with Disabilities Act and the Family Education Rights and Privacy Act (FERPA). Any access to information in education records without consent need to conform with current FERPA requirements and authorizations.

[2] Data sources related to COVID-19 Epidemiology, Community Characteristics, Healthcare Capacity, and Public Healthcare Capacity refer to existing indicators: CDC COVID Data Tracker or /coronavirus/2019-ncov/php/open-america/surveillance-data-analytics.html as well those being monitoring in your state/local jurisdiction.

[3] The ACHA-National College Health Assessment (NCHA) ⧉ is a nationally recognized research survey that provides data about students' health habits, behaviors, and perceptions. It includes new items focused on students' attitudes, concerns, preventive behaviors, and their perceived supportiveness of colleges and universities related to COVID-19.

[4] Disclaimer: These data sources are provided as examples and do not constitute an endorsement of the entity or its guidance or policies by CDC or the federal government. CDC is not responsible for the content of the individual organization sites listed in this document.

[5] The American College Health Association (ACHA) Survey Reports on Health Centers' Pandemic Operating Status and Response 📄 ⧉ collected to study COVID-19 Pandemic's effect on campus health services and represents a snapshot of the college health services' operating status and response at the time the surveys were conducted. https://www.acha.org/COVID-19 ⧉